Bobby Thompson

Software Engineer 2 | Systems design, development, and integration

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PROFESSIONAL EXPERIENCE

Pacific Northwest National Laboratory

Software Engineer 2 · 2021-present | **Software Engineer 1** · 2020-2021 | **Tech Intern 4** · 2019-2020

Design and implement new systems and evolve existing platforms, from requirements through integration, testing, and maintenance. Combine software development, hands-on hardware work, and device data collection.

Developer to lead developer · NSDD Portal

Progressed from developer to lead developer over six years on an inherited JavaScript/PHP Zend portal for international device support. Migrated Windows VMs/SQL Server to Linux VMs/MySQL to reduce costs while maintaining the portal, supporting new features, and responding to headquarters requests. Handled successor-system data handoff, archival requirements, and portal retirement.

Lead software development · MCDC

Led software integration of gamma and neutron detectors into the Multi-Purpose Cargo Data Collector (MCDC), connecting detector data to a larger system for radiological detection of passing train cars.

Test events & data preparation

Worked with government agencies and commercial vendors to collect drug-screening device test data, then reformatted and packaged it for vendors to use in improving their algorithms.

APIs & applications: Developed Python APIs and applications, and PHP APIs with Zend, Symfony, and Drupal.

Internship: Prepared large datasets for archival and graphical analysis. Wrote Bash, PowerShell, and Python scripts to automate tasks and reduce manual workload. Configured and maintained field networks, routers, and cameras during test events.

WSUTC Computer Center | Technical Assistant | 2018-2019

Provided technical support to students and faculty, responding to technical problems and service requests.

SELECTED PROJECTS

Sea of Storms | Implementor (head administrator) & developer

Head administrator since 2006; C/Linux developer since 2021. Designed and implemented combat and shared-story systems, built regression coverage, and resolved hundreds of compiler warnings while supporting a Wheel of Time MUD running since 1998.

ELECT | Team leader · Four developers

Led a four-developer team building a React progressive web app for election and candidate information. Third place in Crimson Code's junior/senior tier in 2020.

TECHNICAL SKILLS

Integration: Device integration, Device data collection, Hands-on hardware work
AI workflows: GitHub Copilot, Codex, AI agents for productivity, reliability, and security
Languages: Python, C, C++, PHP, JavaScript, HTML, Rust, C#, Bash, PowerShell
Frameworks: Flask, FastAPI, Django, Zend, Symfony, Drupal, React, WPF
Databases: MySQL, PostgreSQL, SQL Server, MongoDB
Tools & APIs: Git, SSH, Visual Studio, REST APIs
Platforms: Docker, AWS, Keycloak, Raspberry Pi
Systems: Windows, macOS, Ubuntu, Red Hat Enterprise Linux

EDUCATION

Washington State University · B.S. Computer Science · Cum laude · May 2020